

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for implementing a redundant switched full-duplex Ethernet type communication network including at least two independent elementary networks, each elementary network including at least one source subscriber equipment and at least one destination subscriber equipment, connected to each other through at least one physical link through at least one switch, each equipment being connected to each of these elementary networks, the process comprising:

performing a frame by frame redundancy on each elementary network, wherein the performing the frame by frame redundancy includes:

transmitting frames on the elementary network; ~~network, including the steps of:~~

~~adding a numbering field in each frame transmitted through the switch to insert a frame number, and~~

~~sending each frame with the added numbering field on each of the elementary networks; and~~

receiving the transmitted frames on the elementary network; ~~network, including the steps of:~~

~~storing the received frame number, and~~

~~accepting the received frame only within a predetermined time window if its frame number has not already been received during the predetermined time window~~

limiting the transfer time from a source equipment to one or more destination equipment; and

determining, using a static configuration table, the virtual links that each switch is required to switch and an allowable number of packets for a virtual link.

Claim 2 (Original): A process according to claim 1, wherein there are two elementary networks.

Claims 3-5 (Cancelled).

Claim 6 (Previously Presented): A process according to claim 1, wherein a virtual link provides a link from the source equipment to the at least one destination equipment.

Claim 7 (Original): A process according to claim 6, wherein a virtual link number is accepted in the numbering field.

Claim 8 (Previously Presented): A process according to claim 6, wherein the virtual link has:

a transfer direction, the virtual link being single directional; a fixed passband; a maximum guaranteed time for transfer of packets from the source equipment to the destination equipment; a fixed path on the network; and a unique identifier.

Claim 9 (Original): A process according to claim 1 used for implementation of a redundant switched full-duplex Ethernet type communication network in avionics.

Claim 10 (Previously Presented): The process according to claim 6, wherein the steps used in the subscriber equipment and applied by a virtual link onto the network are such that:

in transmission, for each frame received from a communication stack:

adding a numbering field so that a counter numbers the frame corresponding to each virtual link, and

sending the frame onto the elementary networks;
in reception, for each frame assigned to a virtual link:
storing the frame number, and
accepting the frame if the frame number has not already been received, and if
it has been received, destroying the frame.

Claim 11 (Previously Presented): The process according to claim 6, wherein the
implementation of several services in each subscriber equipment includes:

a transmission service, the role of which is to enable an application to access virtual
links in transmission, wherein this service multiplexes virtual links towards a physical link
through an Ethernet interface, and for each virtual link sends packets as a function of the
passband allocated to the virtual link, and

a reception service that decodes frames, checks the format of the frame and makes
useful data available to applications.

Claim 12 (Previously Presented): The process according to claim 8 implementing a
service for protection of a passband in the switch, which for each incoming virtual link is
capable of checking time characteristics of packets, the packets being destroyed if allowable
time characteristics are exceeded.

Claim 13 (Previously Presented): The process according to claim 11, wherein the
application treats each virtual link as a queue.

Claim 14 (Previously Presented): The process according to claim 10, wherein the
same frame number can be used for two different virtual links.

Claim 15 (New): The process according to claim 1, further comprising:
adding a numbering field in each frame transmitted through the switch to insert a
frame number so that each frame is identifiable in time.

Claim 16 (New): The process according to claim 15, further comprising:
sending each identifiable frame with the added numbering field on each of the
elementary networks.

Claim 17 (New): The process according to claim 15, further comprising:
storing a received frame number that was added to a sent frame.

Claim 18 (New): The process according to claim 17, further comprising:
accepting the received frame only within a predetermined time window if its frame
number has not already been received during the predetermined time window.

Claim 19 (New): The process according to claim 18, wherein the at least one source
subscriber equipment and the at least one destination subscriber equipment are connected to
each other through the at least one physical link through at least two switches which are
interconnected to each other and each connected to at least one subscriber equipment.